

REMARKS

Claims 1-53 are pending in the application. Claims 1-4, 6-23 and 51-53 have been allowed. Claim 5 has been objected to. Claims 24-50 stand rejected in the referenced office action.

Claim 5 has been amended to address an antecedent problem

Independent claim 24 has been amended by adding the adjective "produced."

Independent claim 28 has been amended. The limitations added to claim 28 were originally in claims 36-38. The claim language has been amended to make clear that the system balance deals with produced hydrocarbons. Claims 36-38 have been canceled.

Independent claim 40 has been amended in a manner similar to claim 28.

Independent claim 45 has been amended by adding the adjective "produced."

No new matter has been added by the amendments. The Examiner's objections and rejections are addressed in substantially the same order as in the referenced office action. Reconsideration of the application as amended is respectfully requested.

CLAIM OBJECTIONS

The Examiner has objected to claim 5 for lacking the antecedent to "the management data". Claim 5 has been amended to address the Examiner's objection.

REJECTIONS UNDER 35 U.S.C. § 103

Claims 24, 26 and 27 stand rejected under 35 USC § 103(a) as being unpatentable over *McCormack* (US 6,002,642). Claim 24 is an independent claim.

Claim 24 has been amended to include the element of produced hydrocarbons as part of the automated management of hydrocarbon gathering. The specifications are replete with support for this element. See, for example, page 11 line 25 - page 12 line 5; page 18 lines 14-22; and page 19 line 6. The present invention generally deals with management of hydrocarbon gathering systems in which data pertains to produced hydrocarbons.

McCormack et al. deals with the entirely different problem of reservoir development.

"In the commercial recovery of hydrocarbons it is desirable to estimate the fluid saturations and pressure changes that occur in the reservoir as a result of injecting fluids into the reservoir and producing fluids therefrom, and then compare these results with actual measurements to maximize the efficiency of recovery. A key

constraint in determining accurate estimates is the conservation of total mass of injected and produced fluids, i.e., the 'material balance.' " see col. 1 lines 21-28.

The entire teaching of *McCormack* is related to controlling the flow of fluids into injection wells and the recovery of fluids from producing wells.

"The allocation factors represent the fraction of fluid injected to or produced from a well into or out of a well pattern." Col. 3 lines 7-10.

In order to sustain a rejection under 35 USC § 103 over a single reference, at the very least, the reference must be in the same field as the claimed invention. In addition, there must be a teaching or suggestion in the reference, or a motivation for one skilled in the art to modify the teachings of the reference to come up with the claimed invention.

The first requirement is clearly lacking in the present case. As noted, *McCormack* deals with an entirely different problem than does the present invention. *McCormack* does not deal with automatic reallocation of produced hydrocarbons that have been delivered to a gathering system.

Accordingly, Applicant respectfully submits that claim 24 and claims 25-27 that depend upon claim 24 are patentable under 35 USC § 103 over *McCormack*.

Claims 25 and 28-50 stand rejected under 35 USC § 103 over *McCormack* in view of *Dutton* (US6,318,156).

With respect to claim 25, we note that in order to sustain a rejection under 35 USC § 103, the prior art of record must teach all the limitations of the claimed invention. *Dutton* is in the field of multiphase flow measurements and does not teach or suggest automatic reallocation of produced hydrocarbons. Accordingly, claim 25 is patentable over *McCormack* in view of *Dutton*.

Claims 28, 40 and 45 are independent claims. Claims 28 and 40 have been amended to include a limitation that the system balance relates to at least one of a volume-produced hydrocarbons, a heating value of produced hydrocarbons, and a natural gas component of produced hydrocarbons.

As noted above in discussing the rejection of claim 24, the material balance in *McCormack* is a balance at the reservoir level of the volume of injected and produced fluids and does not deal with the balance of produced hydrocarbons in a hydrocarbon gathering system.

In order to sustain a rejection under 35 USC § 103, the prior art of record must teach all the limitations of the claimed invention. *Dutton* is in the field of multiphase flow measurements and does not teach or suggest a balance relating to produced hydrocarbons. Accordingly, claim 28 and claims 29-35 and 39 that depend upon claim 28 are patentable over *McCormack* in view of *Dutton*.

Claim 40 includes the substantive limitations of claim 28 discussed above. Accordingly, claims 40 and 41-44 that depend upon claim 40 are patentable under 35 USC§103 over *McCormack* in view of *Dutton* for the same reasons that claim 28 is patentable under 35 USC§103 over *McCormack* in view of *Dutton*.

Claim 45 includes the substantive limitations of claim 24 discussed above. Accordingly, applicant respectfully submits that claim 45 and claims 46-50 that depend upon claim 45 are patentable under 35 USC§103 over *McCormack* for the same reasons that claim 24 is patentable under 35 USC§103 over *McCormack*.

Claim 25 stands rejected under 35 USC § 103 over *McCormack* in view of *Streetman* (US 6128579). The *Streetman* reference deals with enhanced recovery of hydrocarbons and remote control of fluid flow. It does not teach or suggest allocation of the volume of produced hydrocarbons in a hydrocarbon gathering system. Accordingly, applicant respectfully submits that claim 25 is patentable under 35 USC§103 over *McCormack* in view of *Streetman* for the same reasons that claim 24 is patentable under 35 USC§103 over *McCormack*.


Claim 29 and 30 stand rejected under 35 USC § 103 over *McCormack* in view of *Dutton* and further in view of *Streetman* (US 6128579). Applicant notes that the combination of *McCormack*, *Dutton*, and *Streetman* does not teach or suggest at least one limitation of independent claim 28, the base claim for claims 29 and 30. Accordingly,

claims 29 and 30 are patentable under 35 USC § 103 over *McCormack* in view of *Dutton* and further in view of *Streetman* for the same reasons that claim 28 is patentable under 35 USC § 103 over *McCormack* in view of *Dutton* and further in view of *Streetman*.

Accompanying this document is a new power of attorney and a change of correspondence address. No fee is believed to be due for these amendments and attached documents. The Commissioner is authorized to charge any fee due for the amendments herein and to charge any deficiency to Deposit Account No. 13-0010 (CON-1029)

Respectfully submitted,

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